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We claim:

1. A method for producing a molded article, preferably a sheet-type molded article, which method comprises the following stage:

I) Compounding and melt extrusion of a mixture I which comprises a blend II which contains:

a) from 1 to 95 wt% of at least one pigment III having a primary particle size of from 5 nm to 20 mm which is selected from the group consisting of an electrochemically inert solid IIIa, a compound IIIb which during charging is able to give off lithium ions, and a compound IIIc which during charging is able to take up lithium ions, and a mixture of the solid IIIa with the compound IIIb or the compound IIIc,

b) from 5 to 99 wt% of at least one polymeric binder IV, and

c) from 0 to 200 wt%, based on the total amount of the components a) and b), at least one plasticizer V,

wherein the proportion by weight of the blend II in the mixture I is from 1 to 100 wt%, and

wherein mixtures I comprising blends II containing, as the polymeric binder IV, a copolymer of vinylidene fluoride (VdF) and hexafluoropropylene (HFP) having an HFP content of from 8 to 25 wt% and, as the plasticizer V, a compound selected from the group consisting of dibutyl phthalate, dimethyl

phthalate, diethyl phthalate, tris(butoxyethyl) phosphate, propylene carbonate, ethylene carbonate, trimethyl trimellitate and mixtures thereof are excluded.

2. A method as claimed in claim 1, wherein the pigment III is a solid IIIa which is selected from the group consisting of an inorganic solid, preferably an inorganic basic solid, selected from the group consisting of oxides, mixed oxides, silicates, sulfates, carbonates, phosphates, nitrides, amides, imides and carbides of the elements of the Ist, IInd, IIIrd or IVth main group or the IVth subgroup of the Periodic Table of the Elements; a polymer selected from the group consisting of polyethylene, polypropylene, polystyrene, poly(tetrafluoroethylene), poly(vinylidene fluoride); polyamides; polyimides; and a solid dispersion containing a polymer of this type; and a mixture of two or more thereof.

3. A method as claimed in claim 1 or 2, wherein the pigment III is a compound IIIb which, during charging, is able to give off lithium ions and which is selected from the group consisting of $LiCoO_2$, $LiNiO_2$, $LiNi_xCo_yO_2$, $LiNi_xCo_yAl_zO_2$($0<x,y,z\leq 1$), Li_xMnO_2 ($0<x\leq 1$), $Li_xMn_2O_4$ ($0<x\leq 2$), Li_xMoO_2 ($0<x\leq 2$), Li_xMnO_3 ($0<x\leq 1$), Li_xMnO_2 ($0<x\leq 2$), $Li_xMn_2O_4$ ($0<x\leq 2$), $Li_xV_2O_4$ ($0<x\leq 2.5$), $Li_xV_2O_3$ ($0<x\leq 3.5$), Li_xVO_2 ($0<x\leq 1$), Li_xWO_2 ($0<x\leq 1$), Li_xWO_3 ($0<x\leq 1$), Li_xTiO_2 ($0<x\leq 1$), $Li_xTi_2O_4$ ($0<x\leq 2$), Li_xRuO_2 ($0<x\leq 1$), $Li_xFe_2O_3$ ($0<x\leq 2$), $Li_xFe_3O_4$ ($0<x\leq 2$), $Li_xCr_2O_3$ ($0<x\leq 3$), $Li_xCr_3O_4$ ($0<x\leq 3.8$), $Li_xV_3S_5$ ($0<x\leq 1.8$), $Li_xTa_2S_2$ ($0<x\leq 1$), Li_xFeS ($0<x\leq 1$), Li_xFeS_2 ($0<x\leq 1$), Li_xNbS_2 ($0<x\leq 2.4$), Li_xMoS_2 ($0<x\leq 3$), Li_xTiS_2 ($0<x\leq 2$), Li_xZrS_2 ($0<x\leq 2$), Li_xNbSe_2 ($0<x\leq 3$), Li_xVSe_2 ($0<x\leq 1$), Li_xNiPS_2 ($0<x\leq 1.5$), Li_xFePS_2 ($0<x\leq 1.5$), $LiNi_xB_{1-x}O_2$ ($0 < x < 1$), $LiNi_xAl_{1-x}O_2$ ($0 < x < 1$), $LiNi_xMg_{1-x}O_2$ ($0 < x < 1$), $LiNi_xCo_{1-x}VO_4$ ($1 \geq x \geq 0$), $LiNi_xCo_yMn_zO_2$ ($x+y+z = 1$), $LiFeO_2$, $LiCrTiO_4$, $Li_aM_bL_cO_d$ ($1{,}15 \geq a > 0$; $1{,}3 \geq b+c \geq 0{,}8$; $2{,}5 \geq d \geq 1{,}7$; M = Ni, Co, Mn; L = Ti, Mn, Cu, Zn, alkaline earth metals, $LiCu_x^{II}Cu_Y^{III}Mn_{(2-(x+y))}O_4$ ($2 > x+y \geq 0$), $LiCrTiO_4$, $LiGa_xMn_{2-x}O_4$ ($0{,}1 \geq x \geq 0$), polycarbonsulfides of the general

structure: $-[C(S_x)]_n-$, V_2O_5, a mixture of two or more thereof, and a mixture of the compound IIIb with the solid IIIa; and the mixture I additionally contains from 0.1 to 20 wt%, based on the blend II, of conductive black.

4. A method as claimed in claim 1 or 2, wherein the pigment III is a compound IIIc which, during charging, is able to take up lithium ions and which is selected from the group consisting of lithium, a lithium-containing metal alloy, micronized carbon black, natural and synthetic graphite, synthetically graphitized carbon dust, a carbon fiber, titanium oxide, zinc oxide, tin oxide, molybdenum oxide, tungsten oxide, titanium carbonate, molybdenum carbonate, zinc carbonate, $Li_xM_ySiO_Z$ ($1 > x \geq 0$, $1 > y \geq 0$, $z > 0$), Sn_2BPO_4, polypyrroles, polyanilines, polyacetylenes, polyphenylenes, lithium metal compounds Li_xM, wherein M = Sn, Bi, Sb, Zn, Cd, Pb and $5 \geq x \geq 0$; Li-Sn-Cd, CdO, PbO, a mixture of two or more thereof, and a mixture of the compound IIIc with the solid IIIa; and the mixture I additionally contains up to 20 wt%, based on the blend II, of conductive black.

5. A method as claimed in any of claims 1 to 4, wherein the mixture I is cross-linked during or after the melt extrusion.

6. A method as claimed in any one of the preceding claims, wherein the mixture is melt-extruded in an apparatus selected from the group consisting of a plasticating single-screw extruder, a twin-extruder of the corotating type, a twin-screw extruder of the counterrotating type, a twin-shaft continuous kneader and a continuous multishaft extruder and a combination of two or more thereof.

7. A method for producing a composite body, which method comprises the following stages:

(I) the preparation of at least one first layer by compounding and melt

extrusion of a mixture I as defined in claim 1, said mixture comprising a blend II which contains a solid IIIb or a solid IIIc as defined in claim 3 and 4, respectively;

(II) the preparation of at least one second layer by compounding and melt extrusion of a mixture I as defined in claim 1, said mixture comprising a blend II which contains a solid IIIa, as defined in claim 2, and is free from a solid IIIb or a solid IIIc, and;

(III) a subsequent bringing together of the at least one first layer and the at least one second layer by a conventional facing method.

8. A molded article, preferably a sheet-like molded article which can be obtained by a method, which method comprises the following stage:

I) Compounding and melt extrusion of a mixture I which comprises a blend II which contains:

a) from 1 to 95 wt% of at least one pigment III having a primary particle size of from 5 nm to 20 mm which is selected from the group consisting of an electrochemically inert solid IIIa, a compound IIIb which during charging is able to give off lithium ions, and a compound IIIc which during charging is able to take up lithium ions, and a mixture of the solid IIIa with the compound IIIb or the compound IIIc,

b) from 5 to 99 wt% of at least one polymeric binder IV, and

c) from 0 to 200 wt%, based on the total amount of the components a) and b), of at least one plasticizer V,

wherein the proportion by weight of the blend II in the mixture I is from 1 to 100 wt%, and

wherein mixtures I comprising blends II containing, as the polymeric binder IV, a copolymer of vinylidene fluoride (VdF) and hexafluoropropylene (HFP) having an HFP content of from 8 to 25 wt% and, as the plasticizer V, a compound selected from the group consisting of dibutyl phthalate, dimethyl phthalate, diethyl phthalate, tris(butoxyethyl) phosphate, propylene carbonate, ethylene carbonate, trimethyl trimellitate and mixtures thereof are excluded.

9. A composite body which can be obtained by a method, which method comprises the following stages:

(I) the preparation of at least one first layer by compounding and melt extrusion of a mixture I as defined in claim 1, said mixture comprising a blend II which contains a solid IIIb or a solid IIIc as defined in claim 3 and 4, respectively;

(II) the preparation of at least one second layer by compounding and melt extrusion of a mixture I as defined in claim 1, said mixture comprising a blend II which contains a solid IIIa, as defined in claim 2, and is free from a solid IIIb or a solid IIIc, and;

(III) a subsequent bringing together of the at least one first layer and the at least one second layer by a conventional facing method.

10. Use of a molded article according to claim 8 or a molded article, prepared according to the method according to any of claims 1 to 6 or a composite body according to claim 9 or a composite body prepared according to a process according to claim 7 for the manufacture of a solid electrolyte, a separator, an electrode, in a sensor, an electrochromic window, a display, a

capacitor or an ion-conducting film.

11. A separator, solid electrolyte, electrode, sensor, electrochromic window, display, capacitor or ion-conducting foil comprising a molded article as claimed in claim 8 or a molded article produced by means of a method as claimed in any one of claims 1 to 6, or a composite body as claimed in claim 9 or a composite body produced by means of a method as claimed in claim 7.

12. Electrochemical cell comprising a separator, solid electrolyte or electrode as claimed in claim 11 or a combination of two or more thereof.

13. Use of an electrochemical cell as claimed in claim 12 as a motor vehicle battery, appliance battery or flat-type battery.